



# CMF / CRF Details

**CMF ID: 4592**

**Convert paved shoulder to composite shoulder (maintain 2 ft width)**

**Description: Convert paved shoulder to composite shoulder (maintain 2 ft width)**

**Prior Condition: Paved shoulder (HSM notes that to determine the CMF for changing the shoulder type, divide the "new" condition CMF by the "existing" condition CMF.**

**Category: Shoulder treatments**

**Study: [Highway Safety Manual, 1st Edition, Various, 2010](#)**

| Star Quality Rating  |  |
|----------------------|--|
| Star Quality Rating: |  |

| Crash Modification Factor (CMF) |      |
|---------------------------------|------|
| Value:                          | 1.02 |
| Adjusted Standard Error:        |      |
| Unadjusted Standard Error:      |      |

| Crash Reduction Factor (CRF) |   |
|------------------------------|---|
| Value:                       | -2 (This value indicates an <b>increase</b> in crashes) |
| Adjusted Standard Error:     |   |
| Unadjusted Standard Error:   |   |

## Applicability

**Crash Type:**

Head on,Run off road,Sideswipe,Single vehicle

**Crash Severity:**

Not specified

**Roadway Types:**

Minor Arterial

**Number of Lanes:**

2

**Road Division Type:**

**Speed Limit:**

**Area Type:**

Rural

**Traffic Volume:**

**Time of Day:**

*If countermeasure is intersection-based*

**Intersection Type:**

**Intersection Geometry:**

**Traffic Control:**

**Major Road Traffic Volume:**

**Minor Road Traffic Volume:**

## Development Details

**Date Range of Data Used:**

**Municipality:**

**State:**

No state(s) chosen.

**Country:**

**Type of Methodology Used:**

|   |                        |
|---|------------------------|
| <b>Sample Size Used:</b>                  |                        |
| <b>Other Details</b>                      |                        |
| <b>Included in Highway Safety Manual?</b> |                        |
| <b>Date Added to Clearinghouse:</b>       |                        |
| <b>Comments:</b>                          | HSM 1st Ed, Table 13-9 |

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